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PHARMACYCLICS ANNOUNCES PRESENTATION OF DATA WITH NOVEL COMPOUNDS DESIGNED TO TARGET VULNERABLE PLAQUE

--Preclinical studies support use of texaphyrin compounds in MRI detection of vulnerable plaque--

Sunnyvale, Calif. -- January 24, 2005 -- Pharmacyclics, Inc. (Nasdaq: PCYC) today announced the presentation of additional preclinical data supporting the use of novel compounds, based on the company's texaphyrin technology, to enhance visualization of vulnerable atherosclerotic plaque, which is widely believed to be a major cause of cardiovascular disease (CVD). According to the American Heart Association, up to 80 percent of heart attacks are caused by vulnerable plaque, inflammatory lesions within the coronary artery wall that cause blood clots when they rupture.

The data was presented at the Society for Cardiac Magnetic Resonance's Eighth Annual Scientific Sessions, held January 21-23, 2005, in San Francisco. The preclinical studies, led by Dr. Albert C. Lardo, and colleagues from the Division of Cardiology and the Department of Radiology at Johns Hopkins University School of Medicine, provided evidence that gadolinium-based texaphyrin compounds may be used as molecular imaging agents that selectively localize in atherosclerotic plaque and thereby enable non-invasive magnetic resonance imaging (MRI) of rupture prone plaque.

"MRI with these agents shows promise as a potential non-invasive imaging technique for inflammatory or vulnerable plaque," said Dr. Lardo. "Our studies indicate that these

agents selectively target the inflammatory and lipid components of atherosclerotic plaque and produce an MRI signal that can be detected non-invasively."

The research team evaluated a series of texaphyrin complexes rationally designed by scientists at Pharmacyclics to target the lipid and inflammatory component of atherosclerotic plaque. These texaphyrin molecules contain the metal ion gadolinium in their core making them detectable by MRI. Administration of these compounds to atherosclerotic animal models followed by MRI scanning indicated that the compounds localized selectively in plaque and enhanced the MRI signal. MRI was performed at various times pre- and post-inoculation with the agents. Good quality vessel imaging was achieved in all studies. At two hours post-injection, MRI enhancement of plaque and its lipid components was achieved.

Most heart attacks and cases of unstable angina occur because of rupture of inflammatory plaque in the walls of the coronary arteries. These lesions contain a lipid core surrounded by inflammatory cells known as macrophages. Currently, there is no diagnostic or imaging technique available to specifically identify these lesions.

Atherosclerosis lesions can be visualized non-invasively by high resolution MRI; however current approaches using MRI are based on detection of blood flow in the vessels and therefore may provide limited information. The development of contrast agents that can selectively target the inflammatory component of atherosclerotic plaque holds the potential to enhance the signal and increase the resolution of MRI scans facilitating detection of plaque and providing detailed discrimination of plaque components. Other techniques used in cardiovascular imaging include angiography and intravascular ultrasound, but these techniques typically are not sufficiently specific for vulnerable plaque detection.

"We believe these findings broaden the potential application of our texaphyrin technology and support the selective disease targeting properties of these compounds," said Richard A. Miller, M.D., president and chief executive officer of Pharmacyclics.

“We also recently reported encouraging results from our Phase 1 trial with Antrin® (motexafin lutetium) Angiophototherapy for the treatment of vulnerable plaque.”

About Texaphyrins

Texaphyrins are synthetic small molecules that resemble naturally occurring porphyrins. These ring-shaped molecules contain a central metal ion in their core. Synthetic modification of the ring or replacement of the central metal ion can alter the chemical and biological properties of these molecules.

Pharmacyclics has been developing a texaphyrin molecule known as Antrin Injection for the potential treatment of vulnerable plaque. Antrin is injected into the bloodstream, where it is designed to selectively accumulate in sites of atherosclerotic plaque throughout the body. Targeted areas are then exposed to far-red light, which is delivered by an optical fiber inserted into the vessel using standard interventional techniques. When activated by the light, Antrin generates a chemical reaction that may selectively eliminate macrophages, causing stabilization or reduction of vulnerable plaque. Antrin phototherapy has completed Phase 1 and Phase 2 testing in peripheral arterial disease, and Phase 1 testing in coronary artery disease. These trials indicated that intravenous administration of Antrin and the Antrin Angiophototherapy procedure are well tolerated, with no serious adverse events.

About Pharmacyclics

Pharmacyclics is a pharmaceutical company developing innovative products to treat cancer and atherosclerosis. The company's products are rationally designed, ring-shaped small molecules called texaphyrins that are designed to selectively target and disrupt the bioenergetic processes of diseased cells, such as cancer and atherosclerotic plaque. More information about the company, its technology, and products in development can be found on its website at www.pcyc.com. Pharmacyclics®, Antrin® and the "pentadentate" logo® are registered trademarks of Pharmacyclics, Inc.

NOTE: Other than statements of historical fact, the statements made in this press release about progress of and reports of results from preclinical and clinical studies, clinical development plans and product development activities are forward-looking statements, as defined in the Private Securities Litigation Reform Act of 1995. The words "believe," "will," "continue," "plan," "expect," "intend," "anticipate," variations of such words, and similar expressions also identify forward-looking statements, but their absence does not mean that the statement is not forward-looking. The forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that may cause actual results to differ materially from those in the forward-looking statements. Factors that could affect actual results include risks associated with the initiation, timing, design, enrollment and cost of clinical trials; the fact that data from preclinical studies and Phase 1 and 2 clinical trials may not necessarily be indicative of future clinical trial results; the company's ability to establish successful partnerships and collaborations with third parties; the regulatory approval process in the United States and other countries; and future capital requirements. For further information about these risks and other factors that may affect the actual results achieved by Pharmacyclics, please see the company's reports as filed with the U.S. Securities and Exchange Commission from time to time, including but not limited to its quarterly report on Form 10-Q for the period ended September 30, 2004. Forward-looking statements contained in this announcement are made as of this date, and we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

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